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THE WALTER REED GENERAL HOSPITAL

From a Patient's Point of View

Captain J. CRIMEN ZEIDLER, D. C., U. S. A.

The Walter Reed Hospital, named in honor of Captain Walter Reed of the American army, one of the officers sent to Panama by the Government to investigate the yellow fever epidemic, was formerly an Army Post infirmary. When war was declared, the Government built a number of additions and transformed the same into a General Hospital.

I HAVE FOUGHT THE BATTLE OF WALTER REED

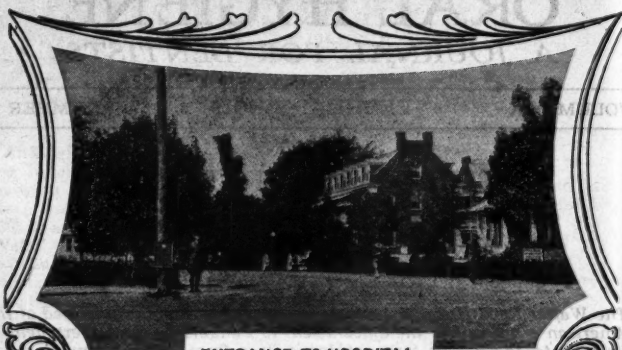


WHEN the din of the past war has grown "dinnest," and all is again peace and "clam," I hope to some night be complacently seated as near a huge open fireplace as my personal fire-and-accident-insurance papers will allow. With the "woof" right across from me, we shall between us be endeavoring to assure our (?) little youngster that the "Sand-Man" is about due, and that the safest way to receive him is to be snugly tucked in between little white sheets.

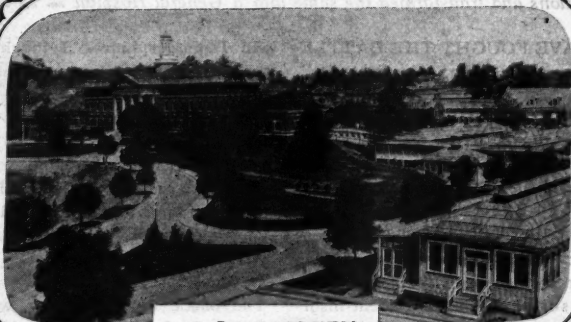
During the day he will have been looking at a large picture-book, wherein the battles of Chateau-Thierry, Cantigny and many others are vividly portrayed. The infant mind has wondered what his father did during the great struggle, and before retiring his parting query will be: "And what did you do in the big war?" Bravely and fearlessly

will I answer him—"I fought in the battle of Washington and in the battle of Walter Reed." How true the above-mentioned "battles" were real honest-to-gawd fights no one knows but those who happened to be in both sectors. At the Washington affair you fought for food, for your sleep, for your clothes, for your hair-cut, for your health and at times for your very life.

The battle of Washington was a fierce one, but not quite as bloody as the battle of Walter Reed. The manner in which you were separated from your money at the battle of Washington was sufficient to cause untold suffering, but modern methods at Walter Reed made possible the severing of limbs and other portions of your anatomy quite painless. I fought in both battles and kept alert during them and know whereof I speak ("write" would be proper, but look at all the erasing I would have to do, so we will let "speak" suffice). I won't tell you any more about the battle of Washington; the memories are such that if enumerated here, their re-



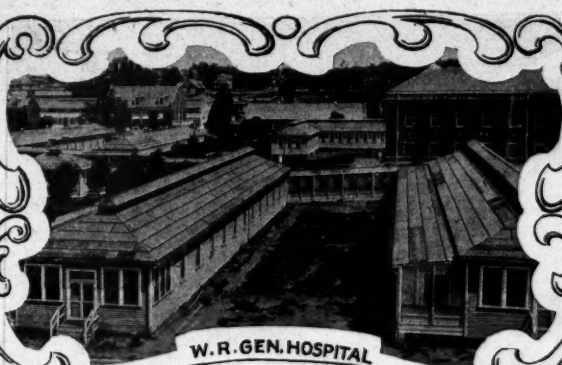
ENTRANCE TO HOSPITAL



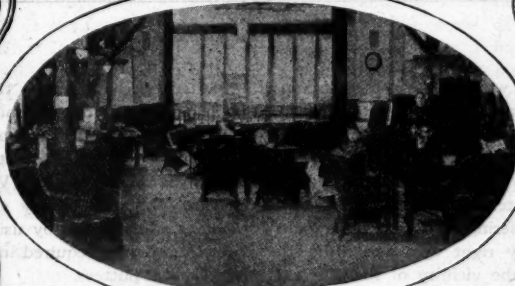
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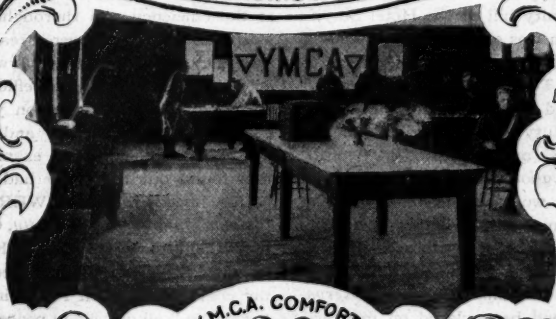
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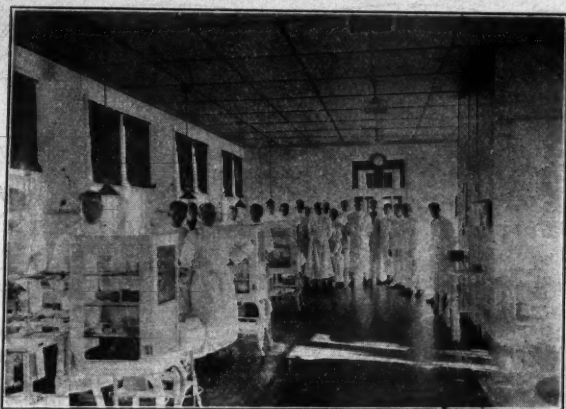
W. R. GEN. HOSPITAL



LOUNGING ROOM



Y. M. C. A. COMFORTS



A small portion of the Dental Clinic

iteration would cause you great pain via your sympathy route so I'll tell you about Walter Reed. Under cover of darkness I worked my way to the receiving-ward in the Walter Reed sector. I had and was suffering with an acute pain over my right eye, and although not in the vicinity of shells I had symptoms closely related to those caused by shell-shock. No doubt my indemnity bill at the Hotel Stayif-youcan was equal to any exploding shell and caused my nervous symptoms. The commanding officer had decided that I was unfit for front-line duty, so he ordered me to officers' quarters number two for *observation*. I expected that an X-ray would be made in order to determine as to whether or not my sinuses were responsible for the pain and that I would be returned to duty; but the little word *observation* had been placed on my card, and take it from me, the only time that I was not observed was when

I bathed—perhaps even then. Upon arriving at my destination I was given a pair of pajamas that had undoubtedly been constructed for our former president, William Howard Toofat. I finally got the pajamas to cover me by using the knowledge I had acquired in wrapping spiral puttees.

I then started making my rounds of the various wards and was amazed at the efficiency and thoroughness with which all cases were treated. Efficiency was the main watch-word at Walter Reed, and if some efficient stenographer had marked on your chart "tonsils removed," and the doctor in making a final examination found out that they had not been removed—well, they **WERE—the chart had to read correctly.** Gee! how thankful I am that "Head removed" had not been placed on my chart. Well, when I had finally "come to," all was again peace and "clam" and men who had lost any of their limbs were being given the

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finest kind of attention in the orthopedic section.

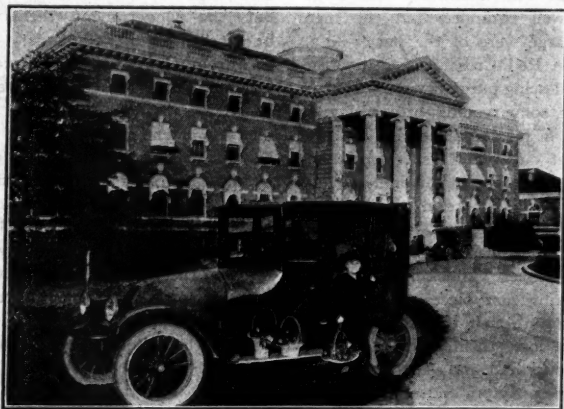
In the reconstruction wards the men were being taught how to make all sorts of toys and many other unique and interesting articles. One young fellow who had only one arm was constructing mechanical toys in their entirety, while another was busily engaged designing a peacock with various colored beads, the same to later serve as a purse. I imagine that when these toys are placed on sale they will be quite a memento. The stamp "Made in Germany" has been supplanted by "Made at Walter Reed."

The most striking phase of the whole hospital is the lack of moroseness and regret. The spirit is such that—well, to me it is simply indescribable. For instance, a number of boys were seated on a veranda, basking in the sunshine. One of them noticed an orderly crossing the lawn with an artificial leg slung carelessly under his arm. In a loud voice one of them

who had lost a leg called out: "Hey, there! Where yer goin' with my leg?" The orderly turned, smiled, turned again and walked on. He was used to such jests.

I then staggered over to the dental clinic and there the greatest of all surprises greeted me. A clinic such as we often dream about was there in actuality. Rows of white chairs, cabinets, sterilizers, cuspidors, etc. In each chair there was a patient and all operators were busily engaged. Colonel J. R. Ames was making his continual tour of inspection and stopped only long enough to explain to me that he was working towards making his department the equal of any. It looked to me after I had loafed around there a bit that his department was head and heels over all others.

The first dental clinic is under the supervision and control of Colonel Ames, and was established under his guidance in February, 1917.



Mrs. Cora Wallace Morton of San Francisco, the "fairy godmother" of the hospital, who has worked most assiduously for the comfort of "her boys."

Total number of patients for whom services have been rendered to December First, are 4,427. From one to seven operators have been employed.

Exodontia operations are in the hands of Captain Naidas. The equipment for treatment of fracture cases is most complete—eleven operations of this nature have been performed to date, and it is expected with the return of our wounded from the Western front, that this part of the work will be of increasing importance.

Upon making inquiries amongst the enlisted men I was satisfied that Colonel Ames' order, viz., "Treat all enlisted men as Brigadier-Generals," had been carried out, for each and every man was more than delighted both with the treatment and quality of work. All extractions are handled in a room especially equipped for that sort of work and the X-ray room contained the latest machine given to the dental profession. The laboratory was large and well equipped and the men in charge were of the best.

In the Red Cross Auditorium the convalescing patients were scattered about, some reading, others playing pool, a few working at jig-saws, and at one table I saw four men, each with an arm missing, playing what I would term the original "four-handed game." Away off in the corner was a former cabaret piano-player "knocking off" a few rollicking jazz pieces. It is in this auditorium that the actors playing at the local theaters come in their off hours and amuse and entertain the men. Actors and actresses were always well known for their inborn or acquired charitable instinct. I must tell you about the "fairy

godmother" of the hospital. She is Mrs. Cora Wallace Morton of San Francisco, and while not a member of any of the authorized organizations, she has worked most assiduously for the welfare and comfort of "her boys." With huge baskets of fruit, candy, and cake she makes her rounds of the wards and distributes her dainties to each and every man. Rain, snow, or shine, she comes early in the morning, and many a night has found her still making her rounds. She carries with her a little memorandum-pad and gets personal requests from the boys. She has suited their particular cravings all the way from chicken-soup to a harmonica. The atmosphere of the whole ward changes as soon as she enters. She does not bother them with questions as to the happenings "over there." Their comfort "over here" is what she is working for, and from all indications she seems to have well earned the title of "fairy godmother." The task is a tremendous one, but the Government seems to be meeting all demands, and under the careful guidance of Colonel C. Schriener and Walter Reed the manner in which the men are attended will, in later life, be a satisfying thought—not only to those who provided the skilled and loving care, but to the soldiers themselves. For them it will be fine to remember that the Government of the United States, viewing with pitying concern their sufferings and wounds, extended itself in salvaging their bodies and lives. Unselfishly and bravely they did their bit toward crushing the unmerciful Hun and in making this grand old country of ours a safe place to live in.

BILLY FORGET-ME-NOT

MAUDE MULLER TANNER, D. M. D., Portland, Oregon

CHRISTMAS HOLIDAYS

In this installment are chronicled the further adventures of Buddy and Billy Forget-Me-Not, who continues to be neglected by Buddy, and is now worried about the brown spots which are coming on his face

Chapter IV.

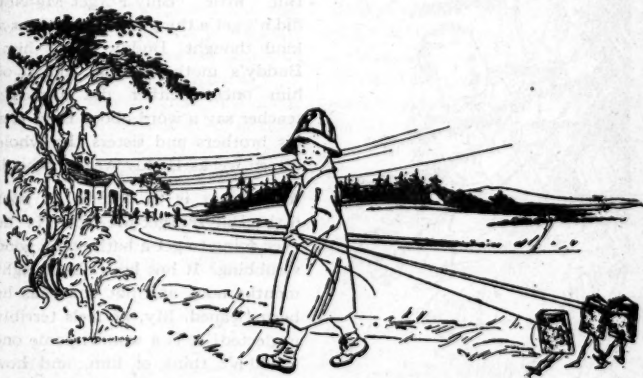


HE twenty-fifth of December will be Christmas day. In a few days you will lay aside your school work and be very busy getting ready for the Christmas holidays. How busy you will be, putting your play room in order, your toys and books where they belong, wrapping and tying up little gifts you are going to send through the mail to loved ones far away, and also doing your bit to help mother!

¶ You must now know what Buddy is doing, and how he got along in school. Remember, he

entered school in September and has now been in school about fifteen weeks, and has enjoyed every minute of his work.

¶ Just the last thing before school let out for the holidays, Buddy's teacher told the children that she wished them all a very Merry Christmas and a Happy New Year. She also told them that she had a very pleasant surprise for them. And what do you suppose it was? A beautiful golden star for the pupil who had the highest standing in the class, and the honor fell to our little friend Buddy. You should have seen how proud he was; he was about wild with joy. He could hardly wait



"Buddy." See how happy he is. He has mastered all his studies. You will see by the books he has been studying that he has not been taught a word about his health. And now, at his age, the foundation for his future life is being laid, and health is the essential. Can a child develop normally with a dirty, diseased mouth? "No!"

until he got home. He could n't walk, but ran all the way, so anxious was he to tell his mother.

¶ When he told his mother and daddy, and had shown them his pretty star, and when the excitement was over, Buddy's mother whispered to his daddy that they would plan a Christmas tree for Buddy and have a grand party. Secretly they planned the Christ-



Children, as a rule, are over-indulged, and not given the things they should have for the good of their health, and the things mostly needed are paid but little or no attention to.

mas tree. They invited the neighbors to come over, and such bustling, such baking of pies, cakes, cookies, roasting of chickens and turkeys; such stringing of popcorn to decorate the tree which Buddy's father and one of the neighbors found away down in the woods and brought home for this wonderful event.

¶ Buddy's mother went to town and did much shopping for the Christmas tree, the big Christmas dinner, and for Buddy. He was such a good boy in school and learned so rapidly that his dear mother could not do enough for him.

¶ It was such a wonderful tree, loaded from top to bottom with pretty things. Everybody got presents and lots of good things to eat. Nearly every one ate too much and did n't feel very well afterwards, especially the children. Every one had an enjoyable time, as each was remembered with gifts and presents. But little Billy-Forget-Me-Not did n't get a thing, not so much as a kind thought. Buddy forgot him. Buddy's mother did n't think of him once, neither did Buddy's teacher say a word about Billy and his brothers and sisters the whole fifteen weeks Buddy was in school!

¶ So what is to become of poor little Billy-Forget-Me-Not? Is he ever going to get a bath and a good scrubbing? It has been about eight months now, and not once has he been cleaned. My, he feels terribly neglected! It is a wonder some one would n't think of him, and how useful he is going to be to Buddy. Pretty soon he is going to make an awful fuss, and begin to ache, if he is n't treated more kindly, and I don't blame him, do you?



These Billy Forget-Me-Nots say these things were made for us, but we don't get them. Why?

BUDDY VISITS HIS CITY FRIENDS.

Chapter V.

AFTER the holidays Buddy returned to school, full of joy and pride, determined to keep ahead of his class and little cousin

Betty.

¶ She was quite disappointed to think of a boy getting ahead of her and now she is going to work hard to beat Buddy. My! what fun they are having, first one ahead and then the other.

¶ Buddy has been promised a visit to the city if he is first in his class when school closes, and of course he is studying and working hard.

¶ He has heard a great deal about his city friend. He is quite anxious to see the city, too, as he has never been many miles from home. His home is in the country. Like all country girls and boys, he wants to visit the city.

¶ It is now the last of May and

school has closed for the year. Buddy excelled all the pupils of his age and many older ones as well. He has won a trip to the city. His mother will go with him, as the lady they are to visit was a playmate of hers when they were little girls.

¶ This lady has a little boy about Buddy's age, whose name is Bobby. He is a nice little boy and likes Buddy very much.

¶ They had a fine time getting acquainted with each other's way and manners. Bobby gave a party for Buddy. Such a time as they did have. They had presents, loads of things to eat, and many surprises; never once, however, did Buddy and Bobby, or their little guests, think of giving the Billy-Forget-Me-Nots a thing, not even a bath.

¶ They did give Bobby's rabbit a good scrubbing and nearly drowned his little dog Bouncer, trying to get him nice and clean, and they were about ready to give the little canary bird a good scrubbing, when their mothers found them and broke up the party.

¶ The Billy-Forget-Me-Nots can't



BETTY



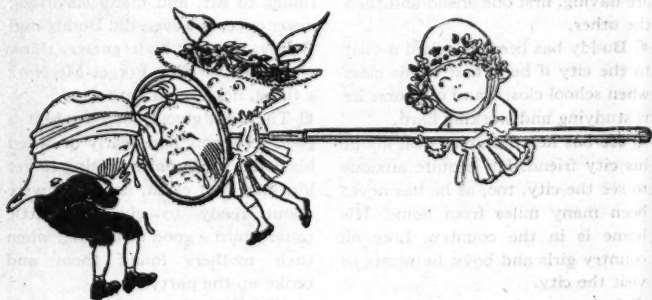
BUDDY

understand why it is that these little folks are so anxious to scrub and clean so many things, even the pretty little canary bird, which takes its own bath, and does not need the help of little boys to bathe, and yet they forget Billy-Forget-Me-Not, who can't wash his own face.

¶ He thinks it would be far nicer of Buddy and Bobby if they would put on their bathing suits, or rubber aprons, so that they wouldn't get their clothing wet, and get a tooth brush (which they neither one have), and scrub his face and neck. He has been used many times a day for nearly a year, and has n't been cleaned and bathed yet.

¶ In fact, Billy-Forget-Me-Not is

very much disappointed. Dark, ugly spots are coming on one side of his face and it is worrying him, as he can't do a thing for himself, and Buddy won't! What is to be done about it? It surely looks badly for the Billy-Forget-Me-Not family; they are all feeling badly. No wonder! How would you or I feel if we had n't had a bath for nearly a year? I think we would be awfully dirty and unclean, and we would n't smell nice, either. Do you think that we would? Well, Billy-Forget-Me-Not does n't smell nice. In fact, he is getting sick. Can you tell your mother why Billy is worried, and getting ugly brown spots on his face, and why he feels so badly?



This I Resolve to Do

G. E. Whitehouse.



a man, being of sound health and disposing mind, hereby set down these things that I have resolved:

¶ I will profit by the experience of others and will not wait to learn sense by my own experience. * * *

¶ I will be teachable. From every human being I encounter I will learn something. * * *

¶ I will decide by my intellect what my tastes ought to be and make myself like the right things. I will put away the weakling's argument that "I can't help my likes and dislikes." * * *

¶ I will keep clean in body and mind * * *

¶ I will not accept as a satisfactory standard what the majority of people are and do.

¶ I will take from the world only the fair equivalent of what I give it.

¶ I will never take revenge, will harbor no grudges and utterly eliminate any spirit of retaliation.

¶ Life is too short for destruction; all my efforts shall be constructive. * * *

¶ I will not engage in any business or sport that implies fraud, cruelty or injustice to any living thing. I will hurt no child, punish no man, wrong no woman.

¶ In everything I do I shall strive to add a little to the sum of happiness and subtract a little from the sum of misery of all living creatures.

¶ I will constantly try to make myself agreeable to all persons with whom I come in contact.

¶ I know death is as natural as birth, and that no man knows his hour. I will not fret at this, nor dodge it, but so live that I am ready to go.

¶ I will believe that honesty is better than crookedness, kindness is better than cruelty, truth is better than lies, cleanliness is better than dirt, loyalty is better than treachery, and love is better than hate or coldness.

¶ I will trust my life and my career to an unfailing reliance upon this creed.

LIAR vs THIEF

JOHN PHILIP ERWIN, D. D. S., Perkasié, Pa.

FACTS FOR FEBRUARY



LIKE most arguments it sprung from a statement of simple fact falling upon hypercritical ears and a super-sensitive nature. It happened in the smoking compartment of a Pullman.

¶ A middle aged gentleman who might have passed for a prosperous politician while discussing the probability of future generations observing President Wilson's birthday as we now honor Washington's and Lincoln's, stated that, *Mr. Wilson possesses to a marked degree the virtue of sterling honesty.*

¶ There was a husky chap of about thirty-five seated in the corner. He was strongly attached to a Jimmy pipe. Judging by his prominent physiognomy, dazzling diamonds and fertile finger nails, I picked him to be a clothing salesman or a distributor of ladies' waists. The remark about the President's integrity evidently struck his sensitive spot. He broke into action like an angry submarine chaser.

¶ "Honest?" he snapped sarcastically, "Honest? And must I tell the truth and make a lot of people unhappy in order to have a *real* birthday? Say, if I told all the truth about my friends not one would come to the party."

¶ This remark provoked hearty laughter. Even the politician admitted the point with a smile. Max went on. "Talk about honest men—why don't they have a legal birthday party for Sherman? "

Everybody today swears that *he* told the truth. And he was born in February. Why don't the lady-politicians in Washington do it up big and brown? Why don't they make it three of a kind, mind you, three of a kind and have *one, immense, grand celebration every February?*" And then he exploded the bomb.

¶ "But I won't join the party. No sir! I want to keep far away from the people who tell the whole truth. Why, I would rather a whole lot live with a *liar* than with a thief."

¶ Every one was interested. The conductor was so absorbed with the conversation that he called the wrong name of a station. Then the politician went to bat.

¶ "So you believe that a thief is a greater menace to society than a liar?"

¶ "Sure, absolutely sure," asserted Max unflinchingly.

¶ "But don't you know I can watch a thief and cannot detect a liar?" argued the politician. "There is no means whatever for me to guard against the rascal who won't tell the truth. To suspect every one would work a handicap upon my friends. To disbelieve all I hear would prove equally disastrous. My personal judgment alone can save me from the traps of the liar."

¶ "I can guard against the thief," continued the politician. "I can place my valuables in strong vaults. It is possible to install burglar alarms. I can avoid the crowds where pick-pockets most do operate. The

faithful watch-dog may scare away the cowardly marauder.

¶ "Since the liar works unseen and undetected like a snake in the grass he is an uncontrollable force. The thief can be held in check. Therefore I naturally conclude that the uncontrolled force is deadlier than the controlled."

¶ It now looked hard for Max. But he came up as confidently as a pinch hitter.

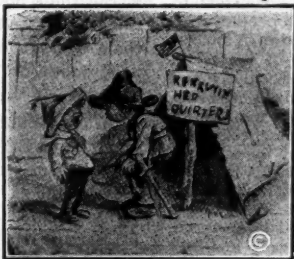
¶ "I don't fear a liar like you do. I like him. He is a mighty good thing to have around. He tells me, 'My, how well you look,' when I feel like a dish-rag. He says, 'Everybody knows you are one of the best salesmen on the road,' when I know I am only a second-rater. When he laughs and tells me, 'My, but you have a lovely wife,' and only the night before she threatened to kill me for staying out until two A. M., why, I smile too and hand him a Girard. Why, if a fellow told me the truth about my wife I would punch his face. Yes."

¶ "But what about the thief," interrupted the politician.

¶ "Yes, but your thief and my thief are two different birds. The thief I fear is not the burglar who steals silverware; not the highwayman who robs passengers. No, nor the land shark, forger or swindler. They don't bother me. But the thief I fear is the dead beat who refuses to pay his honest debts. The biggest crook, the deadliest foe to society is not the liar but the villain who schemes to obtain my goods without paying for them.

¶ "I dare shoot the burglar who jimmies his way into my home at night, but I dare not shoot the sneak who takes my goods in broad daylight with thievish intentions."

¶ I left before the debate was decided. But as I lay in my berth that night I wondered how many dentists would rejoice were they to find checks in the morning mail for all bad accounts due them from such sneak thieves.



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"I'll put you in the commissary, Willie. I see you've got defective teeth."

YANKEE TEETH

The following is an editorial from the North American, date of November 2nd, 1918. The writer has a keen insight as to the actual conditions of the dental profession in the U. S., and its needs. While dental conditions are superior to those elsewhere they are far from ideal, and we are only looking forward to the time when with the co-operation of the public, the reforms necessary may be instituted.

NOTHING our fighting men have taken with them to Europe has been more widely and genuinely admired than their teeth.

Along with merited praise for their physical courage and moral cleanliness has come an unexpected acclamation of the regular rows of glistening enamel revealed by the average Yank smile—and reports have indicated that even in the face of the Hun this smile persisted.

Some idea of the attention thus aroused may be gained from the following comment lately published in the *London Daily Mail*:

One thing about the American soldiers and sailors must strike English people when they see these gallant fighters, and that is the soundness and general whiteness of their teeth. It is all the more striking in that it is such a contrast to the teeth of the British people.

From childhood the Yank is taught to take care of his teeth. He has tooth drill thrice daily, and visits his dentist at fixed intervals, say, every three or four months. If, by chance, a tooth does decay, the rot is at once arrested by a filling.

The result of all this is that our United States cousins, besides adding to their appearance, gain in health by having good clean teeth; and when war came very few men were turned down by the military authorities for having decayed teeth. So daily we see them, their faces tanned, smilingly exhibiting perfect sets of teeth.

It is a distinctive mark of the

American—as distinctive as his uniform or his slang.

All of which is the more interesting because it so well illustrates the marvelous reproductive power of near-facts!

Unquestionably, our boys overseas are better equipped in the matter of teeth than the soldiers in any of the other armies, not only because they come from a country which always has emphasized the need for and led in the development of dentistry, but because their admission to the service was conditioned on the state of their teeth quite as much as any other physical requirement. Incidentally, the writer quoted should know that defective teeth played a leading role in the draft rejections which eliminated one-third of the men subject to the first call!

But think how disappointed this Englishman would be if he should come over to observe our thrice-daily tooth drill or check up our thrice-yearly visits to the dentist!

In New York city and some few of our larger cities he would find this important matter properly attended in the schools. But in a vast majority of our schools would be noted little more than cursory examination of teeth by a nurse or physician; and a leading dental journal recently stated that less than one-sixth of our people "give sufficient thought to their teeth to

visit the dentist with any degree of regularity."

¶ From the same source came the appalling information that among our "unavailable" assets must be numbered some 1,000,000,000 decayed teeth, scattered thru the mouths of our millions, and not only causing discomfort, and, because of impaired mastication, interfering with proper nutriment, but probably responsible for a larger measure of physical and mental incapacity than any other single factor! ❖ ❖

¶ To connect the condition of the teeth with that of the mind, would, until ten days ago, have seemed almost as absurd as some persons regarded the first accusations of decayed and ulcerated teeth as the underlying cause of rheumatism and other affections apparently unrelated to the mouth. But so rapid has been the determination of this curious kinship, and so abundant the proofs of theories at first hailed as "purely sensational," that now the pendulum is swinging in exactly the opposite direction.

¶ Doctors who once scouted any suggestion of such a relationship now turn to the dentist as a necessary first step toward satisfactory diagnosis, and as yet none has questioned the announcement, made by Dr. Harvey A. Cotton, medical director of the New Jersey State hospital for the insane, at Trenton, that there is a direct and provable relation between infected teeth and certain forms of insanity.

¶ In a report based on tabulated and verified results of eleven years of experimentation, Doctor Cotton says, without reservation, that numerous cases of different mental maladies have been completely

cured by extraction and treatment of bad teeth, and by removal of infected tonsils and proper medical treatment of the systemic poisoning caused by the organism which chooses the teeth as its trench.

¶ So trustworthy is the source and so amazing the substance of this report that we reprint two paragraphs which indicate its vital significance. Doctor Cotton states:

¶ We are able to cure early cases in a very short time, prevent the disease from becoming chronic in a large number of cases and restore a certain number who have been in the hospital for as long as nine years. This we are doing daily.

¶ We have found that infection of the chronic type and the resulting toxemia are the basis of many mental disturbances. These chronic infections are known as focal infections and may be present for years without their existence becoming known to the patient, and until quite recently the physicians and the dentists have been ignorant of their existence.

¶ We are practically prepared to state that this infection originates in the teeth, as we find the same organism in the abscessed teeth, tonsils, stomach and duodenum, and in no case have we been able to eliminate the teeth as the origin of the infection.

¶ We have had five acute maniacal cases who died within a short time after coming to the hospital. Formerly the cause of death was considered due to exhaustion from excitement, but a bacteriological study in these cases showed all the organs practically infected ❖ We feel that we have established a very important fact as applicable to general medicine as to nervous and mental diseases, that is, that the infection originates in the teeth, and after some years infects other organs thru the lymphatic system.

* * * * *

¶ At the New Jersey institution every precaution was taken to

prevent a premature or ill-based announcement of results. Not until direct cultures were made from the organisms found in the stomach and intestines of patients under treatment, and these positively identified as the organism found in the tooth abscesses, was it settled in the minds of the investigators that the mouth conditions were primarily to blame. But after this identity was proved and the elimination of the toxic condition caused by the organism had effected complete cures, there could no longer be reasonable doubt.

¶ In consequence of these startling results, the dentist has become one of the most important practitioners in the Trenton asylum. And, having such impressive first-hand evidence of the value of tooth-care, Doctor Cotton recommends a nation-wide campaign of education in regard to the care and treatment of teeth.

¶ This latest development in the rapidly growing chain of connection between infected teeth and various widespread diseases prompts us to a brief backward glance at an editorial published on this page several years ago—the first newspaper discussion of that nature, so far as we know, concerning a matter which even so recently was looked upon as of minor importance. As a matter of fact, some of our friends then jestingly criticised our espousal of the subject, on the ground that it was not of sufficient moment to justify such attention.

¶ It is the concept of *The North American* that it is as much the

function of a newspaper to concern itself with questions of general health as with its primary function of the presentation of current news. And in view of what has transpired in this particular field since the publication of that first of our "tooth" editorials—especially this latest discovery—it seems eminently fitting to reprint a quotation then cited—a statement by Dr. W. C. Rucker, assistant surgeon-general of the United States public health service

¶ "There is a close relation between mental development and dental development," he said, "and elaborate data recently collected in Cleveland relating to the school children of that city showed that health of the mouth and standing in the class were things intimately associated. In a number of cases children who were inattentive, stupid and even incorrigible became normal, well behaved, bright and studious when their mouths had received proper treatment. The results obtained by such means were, in fact, little short of marvelous."

¶ So there would seem to be a logical basis for the results obtained at Trenton. In any event, we now know beyond peradventure that Yankee teeth, as they have won admiration afar, will even more surely win health and efficiency for us here at home, if properly cared for. And one of the vital tasks ahead of us is to see that the excellent results thus obtained in the army shall be extended to the nation at large

¶ It is of the utmost importance that the toothbrush be made a universal weapon for defense against disease



THOUGHTFULNESS

PAUL S. COLEMAN, D. D. S., Wilburton, Oklahoma

It always seemed to the Editor that ingratitude should have been mentioned in the Ten Commandments. Thoughtlessness is but a manifestation of ingratitude, and the author has just cause for complaint ~ ~ ~

ONLY a little post card, with two or three words upon it, from some boy in France, is what lots of us members of the Preparedness League of American dentists who have spent hundreds of dollars, and also many hours of precious time, would like to have now and then. How many of you have dentally prepared fifty or a hundred or maybe two hundred boys for service free of cost to Uncle Sam, and free to the boy, and, have like myself, exercised a great deal of care and time and given the recruit the best that was in you, in order that he might be better fixed up to fight the nation's battles and that he might enjoy a fair degree of comfort for several years to come; and maybe, you, like myself, thought you had a whole lot of young friends who would be called, and you have perhaps, like myself, experienced a small amount of active fighting service and knew just about what was coming, and coached your friends in various things as to what to do and not to do in order to have smoother sailing. Also perhaps you have dug down into your jeans and forked out every red cent you could possibly spare to buy bonds, stamps, pay your Red Cross and other assessments, and a little more, and in every way done your share, and a

little more, and gladly and without one thought of ever having Uncle Sam, or any other uncle, say "thank you." You don't expect it because you have just been doing your duty. But one or two, or a dozen of those boys upon whom you labored many hours and spent money freely and gladly and would do it again and then again—by a small post card—the mailing of which would n't cost him a penny, could gladden your heart to an untold extent—if he would only do it ~ ~ ~

¶ Something over two hundred fell to my lot. The other day one of them, who I had placed in excellent condition and at quite an expense to myself, took it upon himself to write me a friendly note—the very first one I had ever received—and knowing soldiers and their ways and that they are habitually "busted," so to speak, and in a foreign land where only money talks, and where a few francs will work wonders in many ways and open many doors dear to the soldier's heart—I sat down and sent him a hundred francs and told him to have one grand glorious time at my expense, and keep the change. But in all candor—just a word of thoughtfulness from those we have thoughtfully and carefully helped makes us all feel better and more willing to do our service, because not all of the fighting has been upon the firing line. ~ ~ ~

THE ETIOLOGY OF INFLUENZA

COL. VICTOR C. VAUGHN, Washington, D. C.

The following forms part of the discussion of a paper read before the American Public Health Association on "The Etiology of Influenza" at the annual meeting, Dec. 8-11, 1918. Dr. Vaughan is ex-president of the Association and an authority on this subject.

BEFORE a barracks was built for the accommodation of our soldiers, Surgeon-General Gorgas understood thoroughly that the diseases we should have to deal with would be the respiratory diseases, as we call them. It is not generally known, but it is true that of all the diseases that General Gorgas had to deal with on the Canal Zone, neither malaria nor yellow fever was the most difficult. It was pneumonia. He knew how to prevent yellow fever and malaria, but he did not know how to take care of pneumonia. Three of us, with Surgeon-General Gorgas, went to the Secretary of War before there was a barracks built, and we told him that the disease we should have to deal with would be pneumonia and kindred diseases, and we asked that sufficient space be provided in barracks for the men. The Secretary of War was highly appreciative of what we said and ordered it done. I want to say that with respect to crowding in our armies, I have come to realize that in the army, especially in our camps, crowding in barracks is of very little importance compared with crowding under other conditions. When men are in the barracks and are asleep, they are not coughing, they are not sneezing, or doing anything of that kind. Most of them are asleep. It is when

they are assembled in a large hall that trouble comes. At Camp Forest there were 9,000 people in a hall, for instance, and if every individual was perfectly upright, inclining his head neither forward nor backward, and the noses of these people were within 16 inches of one another, that being the greatest distance laterally, or 26 inches, with coughing and sneezing violently, you can readily understand what the condition of the atmosphere must have been, and it would have made but little difference if that building had had no roof and no walls to it. You can crowd men outdoors, and while they are outdoors you can crowd them just as much as when they are indoors; and I must say that this was something I had never thoroughly appreciated.

One word with reference to pneumonia, before we come to influenza: We had a splendid record for the first six months of the war. We had a death rate but little above that of the same age group at home; and thirteen out of the twenty-nine large cantonments had a death rate lower than the same age group at home. The Illinois division at Waco, Texas, had a death rate in the first six months of the war of less than one half of what occurred during the same time among the same age group in the city of Chicago because they were selected men. You remember

that the infectious diseases, especially the respiratory diseases, kill 40 or more per cent men than women, and all these were men. So it is a wonderful record, and the same is true of New York, Pennsylvania, Ohio and various other organizations.

¶ So far as pneumonia is concerned, during the first six months these facts seemed to be established so far as figures can establish anything: The city boy lived, the country boy died; the Northern boy lived, the Southern boy died. Whether these two were exactly the same or not, I do not know. Of course, the rural population is greater in the South.

¶ Influenza—clinical influenza—struck our camps last February. It has been written up by Major Soper, and the report was published before the present epidemic of influenza came. It possessed all the clinical features of influenza that have existed this fall. At Camp Forest it came as it came on Camp Devens last fall, like a thunderbolt out of a clear sky, and prostrated a large number of people, and it was not followed by pneumonia. There were no deaths. Normally deaths did not increase as a result of it. We were on the outlook for influenza all the while. The first intimation we had in the Surgeon-General's office of influenza's threatening this country came in August. A steamship on its way across the ocean from France was struck by influenza and it was so badly hit that all of the seamen were prostrated and it had to put into Halifax before it could proceed to New York. We had that warning in August, and when this steamer reached New York it was thoroughly disinfected, and all this time this procedure was

carried out at New York and Newport News. All troops ordered to France were sent to Hoboken and to Newport News and held in quarantine fourteen days. Every man was examined and his temperature taken once every day. No man with any elevation of temperature was allowed to go on board. As the men went on the boat in single file they were examined. The examinations were made daily, and if the men were found with elevation of temperature or sign of illness they were sent back home. We were looking for influenza of the virulent type at Newport News and New York, but influenza did not occur in New York, nor did it come into New York; it came in Boston. It may be a mere coincidence, there may be some thing more in it, but the influenza in 1899 entered the port of Boston. I think I can say with reasonable certainty that this influenza epidemic came into Boston Harbor, was landed at the Commonwealth Pier, struck Boston and Camp Devens only a few miles from Boston, spread from Camp Devens all over the country, and has traveled rapidly ever since. There cannot be any question as to how influenza travels; it travels on two legs, and man is the carrier.

¶ I went to Camp Devens as soon as the epidemic was reported, and I might say that I thought my eyes would never see such horror as I saw there. I went through the Spanish-American War; I saw thousands and thousands of cases of typhoid fever, but I never had anything so depress me as the conditions that existed at Camp Devens.

¶ Unfortunately, it has been almost impossible for us to study influenza. Why? Because men were dying from

pneumonia, and we cannot spend the time to examine the blood of patients with influenza when so many people are dying from pneumonia. We are going to have influenza with us; it is not going to disappear very soon. I do not want to be a pessimist; I am always an optimist.

¶ The second year of the epidemic of 1899 showed more deaths from influenza than the first year, and we are going to have the influenza epidemic for some time to come. Let us make a study of influenza as well as of pneumonia. Let us find out what is the cause of influenza. If I were asked to define influenza, I should say it is a disease of unknown origin, characterized by a marked leukopenia, and I am sorry that that has not been studied more carefully. As a result of the leukopenia the gateways of invasion are open, and any micro-organism that is lying around may invade the lungs if it is capable of growing and multiplying there.

¶ So far as pneumonia is concerned, I am convinced that any micro-organism that will grow and multiply in the lungs may cause pneumonia. It is not the pneumococcus or streptococcus alone; it is not the Pfeiffer bacillus or the Friedlander bacillus alone. Any organism that may grow and multiply in the lungs will cause pneumonia. One man who studied pneumonia at Camp Devens came to the conclusion that the influenza and pneumonia were due to the Pfeiffer bacillus. Another man equally competent who studied it here at Camp Grant said it was due to a pneumococcus; another man studying it somewhere else said that it was due to the strepto-

coccus, and so on. We can say, I think, with a great deal of certainty that influenza is very much like measles in this respect. It takes away resistance; and the organism that takes advantage of this is the prevailing organism in that community. We have streptococcus pneumonia; we have Friedlander's bacillus pneumonia, and so on. It has been observable all the way through this epidemic, and it has been mentioned in other epidemics of pneumonia following influenza, that it kills the strongest and most vigorous. Typhoid fever is more prevalent in men than in women and more prevalent in young women than among old men, because those people have the greatest range of activity. The man who is in a hospital, or the man who is on duty, is drinking water here and there. The greatest mortality was highest among the strongest and most vigorous because these have the greatest range of activity.

¶ The death rate is higher in the civilian population between 20 and 40 years of age. Of course, in the Army we have only those between 20 and 45 years of age, and we have most susceptible material. We have been trying to find out what we could about this, and we calculate that these figures may not be exactly right. In Richmond, Va., for example, of the inhabitants between 20 and 40 years of age, there was one in six times as many deaths as had occurred. So we compared the death rate of all the inhabitants between 20 and 40 years of age with the death rate in the civilian population according to the number of those between 20 and 40 years of age. Here is the point: These diseases find suitable material be-

tween 20 and 40 years of age. I did not quite believe this, and there is an easier explanation than that. I think it is like typhoid fever, and that is, people between 20 and 40 years of age herd together, and on the whole the people who crowd together are the people between 20 and 40 years of age, either in military or civilian life. I want to exclude the possibility that there may be greater susceptibility at that age. Some say the older people have had it, and have asked why the younger people do not have it more. I will not go into that phase of the subject.

¶ In the civilian population there are going to be recrudescences of it. Whether there are going to be recrudescences in the camps or not, I do not know. From a scientific standpoint, it is unfortunate, that our camps are soon to be dissolved. We should like to know about this. We have been trying to distinguish between relapses and recurrences. We find a small number of people who have had influenza without pneumonia, who have thoroughly recovered, who have been apparently perfectly well from two to three weeks, and then they have come down again with all the original symptoms just as though they never had it. There is a larger number who think they have not entirely recovered. These were relapses, and we are trying to dis-

tinguish between recurrences and relapses. You cannot put any trust at all in the figures. In some places they call everything influenza if a man sneezes once or twice. In other cases they call it influenza pneumonia. In one camp there was an order that nothing should be called influenza unless the Pfeiffer bacillus was found, so we cannot tell how many cases existed in any camp in the United States. We can give the figures as they are put in, but we cannot tell what the percentage of influenza cases with pneumonia was. One thing that is certain is death. The diagnosis of death is certain. There is no question about that. We are figuring out that a certain percentage in this cantonment or this camp, etc., died.

¶ So far as the prevention of the respiratory diseases is concerned, we do not know anything more than our ancestors knew a hundred years ago, and we may as well admit it. I say that in the face of the greatest pestilence that has ever struck our country; we are just as ignorant as the Florentines were with the plague described in history. Now that the war is over and we have whipped the Hun, it devolves on the medical profession to work hard over the respiratory diseases, and see what we can do for them, and we must not stop until something of great value is done.



WAX IN COMMERCE AND INDUSTRY

The subject of wax immediately implies it is the work of bees. As a matter of fact we have arrived at a point where the vegetable waxes are used largely to adulterate the beeswax made by bees. That there are so many varieties of these vegetable waxes and that they are used for so many purposes comes as a surprise to most dentists. It is a question if some one of these, or in combination with the animal beeswax, might not serve a most useful purpose in dentistry. This article, although rather lengthy, is interesting and is worthy of close attention.



THE increasing importance of waxes for industrial purposes has been an exceedingly interesting commercial development of recent years, and the present struggle has served to emphasize the economic position which these commodities enjoy. In addition to the creation of new demands, hitherto relatively minor uses have acquired added significance. Confronted as we are by the necessity of furnishing shoes to our soldiers, the use of carnauba wax, for instance in the manufacture of chrome leather assumes considerable importance. Since the shutting off of the Galician oil fields, an expansion in the production of paraffin wax from American petroleum has taken place. As a result of the war the supply of certain mineral waxes from Austria and Germany was cut off, and these have been supplemented in some branches of industry by vegetable waxes and beeswax, which have also experienced a great independent increase in demand. The rise to prominence of Brazilian carnauba wax in this country has been especially pronounced, and partly as a result of its comparative scarcity and consequent high price other vegetable waxes, such as candelilla and Japan wax, have also made considerable progress. De-

velopments and changes of a similar character have taken place in other countries, and the international structure of the wax industry, still in a nascent stage, has been materially altered; as a consequence of which we may look forward to a new organization at the close of the war, superseding that of 1914, with new sources of supply, demands of a different nature, and changed methods of trading.

¶ During the last few years, largely as a result of the great scarcity of certain kinds, the handling of waxes has become very competitive, and the number of jobbing houses and brokers dealing in waxes in this country has been reduced.

¶ The proper combination of waxes for specific and peculiar purposes represents a commercial problem whose extensive possibilities have by no means all been solved, but in general, hardness, plasticity, compatibility, and cost are the main elements to be considered. There are, unquestionably, mixtures used today which constitute a matter of individual knowledge, and are not commonly known. In France and Germany many artificial waxes are covered by patents. The commercial combining of waxes, however, should be carefully distinguished from fraudulent adulteration which is so frequently practiced and whose detection is a very interesting chemical study.

¶ The following is a list of some of the applications and uses of various natural waxes, from which an idea can be obtained of their varied utilization: floor wax, wood finishing wax, furniture polish, shoe polish, automobile polish, leather polish; wax varnishes and paints, turpentine stains; floor mop compounds, linoleum renewer; wax oils, machinery greases; candle stock; soap bases; copy paper coating, glossy paper; printer's and lithographer's ink; compounds with rubber substitutes, increase viscosity of blown linseed oils and other oils; increase melting-point of cocoa butter and cocoa oil.

¶ Few people realize how closely associated waxes are with the great expansion of electricity. Their peculiar properties as non-conductors of a current, together with the high melting-point of certain grades and their resistance to chemical agents and to the elements, make them practically indispensable in insulation. As a result of war requirements, greater quantities than ever are being consumed to day by manufacturers of electric wire. Waxes are also of paramount importance in water-proofing, another use whose importance war demands have accentuated, due to the necessity of waterproofing tents, shells, and cartridges. Pharmaceutically, waxes enjoy extensive employment, inasmuch as they are valuable ingredients of ointments, salves, cosmetics, etc. The Red Cross is purchasing large amounts of wax. It is said that paraffin is serving on the battlefields of France as an antiseptic dressing for wounds.

¶ Very interesting indeed are some of the recent developments in the candle making industry, which has

been an important source of demand for wax for centuries back. Modern methods of trench warfare have created a new demand, and the Government is purchasing large quantities of paraffin candles, which also contain 20 per cent of stearic acid, due to the fact that pure paraffin candles gutter and burn only a very short while. The laws of the Greek Catholic Church demand beeswax for ritual candles and the recent shortage of beeswax in Russia must have presented a perplexing problem which was probably solved by adulteration. The Roman Catholic Church has modified its regulations to permit the admixture of cheaper substitutes. Some beeswax is still used today for making wax figures, artificial flowers and vegetables, etc.

¶ Carnauba wax, which has recently attracted so much attention is a hard, brittle, yellowish or brownish-gray substance, obtained from the leaves of a palm indigenous to tropical South America. Attempts to raise the palm in India and Japan have proved unsuccessful. The State of Ceara, Brazil, is the chief producing region, while considerable amounts are obtained from Piauh, Rio Grande do Norte; Matto Grosso, Bahia and Pernambuco. Up to the present the growing of the carnauba palm, or carnahubeira, as it is called, has been of an extremely haphazard nature, and there is no question but that the adoption of scientific agricultural methods of cultivation would be rewarded by increasing yields of the wax, which has come to be an important export article of Brazil. The process of extracting the wax from the leaves and preparing it, is also very primitive. The wax

is scraped by hand with an iron-toothed instrument and is then thrown into boiling water. As a matter of fact, the whole carnauba industry is still comparatively undeveloped, and any very extensive expansion will require a more efficient and up-to-date procedure under the direction of large-scale enterprise. In the past the industry has been in the hands of small native growers who have sold their output to exporting houses on the seacoast.

¶ The carnaubeira, itself, is a remarkable plant and merits a few words of description. Its raising represents a vital local industry, inasmuch as every part of the tree serves some practical purpose: palmito, the heart of the palm, is a palatable food; the roots possess medical qualities; the branches enter into the construction of houses and bridges; the straw and fibers are employed in the manufacture of brooms, rope and paper. The wax is exuded by the leaves on whose surface it forms a white powdery film. About 10,000 leaves are required to yield 100 lbs. of wax. The ability to withstand the extreme droughts which are so frequent and so destructive in Northern Brazil enhances greatly the value of the carnaubeira.

¶ The carnauba wax industry has developed considerably since the beginning of the war. Exports to the United States alone increased from 2,079,755 lbs. in 1913 to 7,107,646 lbs. in 1916 (years ending June 30). Before the war Hamburg was the principal European market, while Liverpool was also the recipient of large shipments. In 1813 the total exportation of carnauba wax from Brazil amounted to 8,507,638 lbs.,

of which 44 per cent went to Germany, 24 per cent to the United States, 18 per cent to Great Britain, 13 per cent to France, and some 45,000 lbs. to Belgium. The principal ports of shipment were Fortaleza, Ilha do Cajueiro, Pernambuco and Bahia. As a result of the war, shipments to Germany have ceased, whereas the United States has become the leading importing nation. Exports to Great Britain have also increased tremendously.

¶ In the last two years, dearth of shipping space has had the effect of reducing the exports of carnauba wax from Brazil; in 1917 total shipments amounted to 8,071,800 lbs., as against 12,973,400 lbs. in 1915. Nevertheless, despite the urgent need of conserving tonnage, our Government has refrained from placing carnauba wax on the list of restricted imports, in view of its employment in tanning, electric insulation, and other industries essential to the prosecution of the war.

¶ Canauba, more than any other wax, imparts luster to the preparation of which it is a component part. In consequence of its hardness and high melting-point, it takes a bright gloss on rubbing with a cloth, and therefore proves a valuable ingredient in shoe, floor and furniture polishes. Even before the war carnauba wax found a ready use in the manufacture of phonograph and gramophone records, cable coverings, wax varnishes, high melting-point candles, tailors' chalk, etc. That the making of carbon paper involves the use of carnauba wax is a fact not commonly known. Carnauba wax is also a constituent of certain cerates in pharmaceutical practice.

The assertion has been made that it enters into the manufacture of munitions, but in what connection or to what extent cannot be definitely ascertained.

¶ Previous to the outbreak of the war, carnauba wax was graded for consumption in the large European centers, but at the present time the quality is specified by the exporting firms in Brazil, who sell in the United States to houses of established connections or through representatives in this country. Most of the exporting concerns are in the northern producing states, but since the inception of the war an increasing amount of carnauba wax has found its way to Rio de Janeiro, whence it is shipped by brokers. The grades are as follows, in order of quality: Yellow flor, yellow prime, yellow medium, grey fatty, and chalky. The last two grades are derived from the older leaves and bring a lower price. The wax is refined by remelting and straining. It is bleached by treatment with potassium dichromate or with Fuller's earth, and paraffin is often added, thereby lowering the melting point.

¶ The discovery of potash in the refuse formerly discarded as valueless has augmented to a considerable extent the importance of the recently formed candelilla wax industry. Growing in the semi-arid stretches of Northern Mexico and Southern Texas, and rarely exceeding three or four feet in height, the candelilla plant consists of a leafless bunch of green stems about half an inch in diameter. The larger part of the wax comes from Mexico, but the American factories are located on this side of the Rio Grande as a measure of protection against bandit

depredations. The American manufacturers have been attracted by the advancing market and the urgent demand for a substitute for carnauba; at the present time there are six plants producing 1,000 pounds or more of candelilla wax daily.

¶ The wax, which is exuded by the plant as a protection against drought, is extracted and refined in boiling and steam tanks. When refined, candelilla is a hard, brittle, straw-colored mass with some of the properties of carnauba and some of beeswax. It is said that in combination with the latter, certain grades of candelilla successfully replace the natural beeswax as a comb foundation. Mixed with certain grades of ozokerite, candelilla forms a very satisfactory molding compound for electrotypers. The potential importance of candelilla wax lies in the fact that it has demonstrated its ability to substitute for either beeswax or carnauba in a great number of their applications. Candelilla wax is marketed in broken pieces in bags of about 100 pounds.

¶ The extraction of Japan wax from certain species of the sumach tree is an important industry of the Far East, and this vegetable wax is coming more and more into demand in the markets of the world, despite a temporary slump resulting from the closing of the German market in 1914. It is said that to-day France and England are using large quantities for the waterproofing for tents. The price of Japan wax has risen tremendously since the war, as a result of higher labor in Japan, inability of production to keep pace with the increasing demand, scarcity of shipping, and higher freights. The trees from which the

wax can be produced grow mostly in the western provinces of Japan; also in China, in Indo-China (Tonkin, North Annam, Cambodja) and in India (Sikkim, Nepal, Butan, and Kashmir). In the past Japan wax has been purely a by-product of the laquer industry, but the work of extraction is now being organized on a more comprehensive scale, especially in Japan. The prefectures of Fukuoka, Saga, Oita, and Ehime are the principal producing regions.

¶ The leading refineries are located in Kobe and Osaka. The wax occurs as a greenish coating on the berries of the sumach trees, which attain a height of 20 to 25 feet and sometimes yield when over 100 years old. The wax is extracted by crushing and steaming the berries, and subjecting the mass to pressure. The wax is then remelted and bleached. Perilla oil is used in the process of preparing Japan wax to increase the output and accelerate bleaching, it is said. The berries are usually stored before being crushed, inasmuch as the quality of the wax improves if they are permitted to mature. The wax is exported in the form of slabs. Adulteration with water or with starch is common.

¶ Unless the price becomes prohibitive—as is the case at the present moment—Japan wax is used in this country very extensively by soap manufacturers and to a lesser degree in making fancy candles. Laundry wax represents the most common form of this vegetable wax from the Far East. Japan wax is a constituent of some polishes and enters into the manufacture of stencil paper. It is also used for waxing floors and currying leather, and is contained in some lubricating

greases. Although always commercially classified as a wax, Japan wax, from a strict chemical standpoint, is a fat, in view of the fact that it contains glycerine. The same also applies to myrtle wax, which is obtained from the berries of a shrub growing on the Atlantic Coast of America, and which is used to a small extent as a candle material and as a polish for leather.

¶ Vegetable waxes, occurring mostly as a very thin film, covering leaves and also plants, are widely distributed throughout the world, but their recovery in the past has been neglected, due to the rather small yields. The future will surely see an increased interest in their production. Even before the war, the British Imperial Institute, in pursuance of Great Britain's policy of the development of sources of raw materials, was experimenting with certain waxes; among others, berry wax from Cape Province and raphia wax from Madagascar. More recently, attention has been called to a very high melting-point wax in Columbia, obtained from a wax palm growing in that country. Chili, Venezuela, and Ecuador also yield limited quantities of vegetable wax. Cane wax, derived from the by-products of sugar cane manufacture, is rapidly becoming better known. First successfully extracted in Natal, its recovery bids fair to become an important industry, in view of the large sugar cane production in the tropics. The commercial position of these waxes will depend largely upon their ability to replace carnauba in some of its uses.

¶ The paraffin of commerce is a white to bluish translucent waxy material of lamino-crystalline

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structure, and is obtained from petroleum, shale oil, and lignite. To-day petroleum is the chief source, although only certain varieties of oil produce marketable quantities. Most of the Russian petroleum contains practically no paraffin, although the oil obtained from the Tcheleken Islands forms an exception. The Grossny fields also produce small amounts. The East Indian petroleum, especially those of Assam and Upper Burma, are not only very rich in paraffin but also produce the highest melting-point varieties of commerce. Rangoon petroleum yields from 10 to 15 per cent of paraffin wax. The oils from Java, Timor, Borneo, and Algeria also contain considerable proportions. The yield from Mexican petroleum is very poor. Only about 2 per cent wax is obtained from the petroleum of Roumania, Canada, Galicia, and the United States, but the extensiveness of the oil industry in the latter two countries has been the cause for their dominating position in the paraffin trade.

¶ The Scottish shale industry represents one of the most important sources of paraffin. The yield is high and ranges from 10 to 15 per cent. Deposits of shale also exist in France, Servia, Saxony, Nova Scotia, and New South Wales. The Saxe-Thuringian lignite industry yields considerable quantities of paraffin wax. A few years before the war the discovery was made that a hard brittle brownish-black wax, subsequently called montan wax, could be extracted from lignite with petroleum ether. Together with peat wax, montan wax forms a class known as bitumen waxes, which before the war, were used much like carnauba; that is, in the manu-

facture of polishes, phonograph records, and for insulating purposes. Their supply has of course been shut off.

¶ The crude paraffin is known commercially as "scale;" it is refined by a process called "sweating." This consists in exposing the solidified wax to a warm temperature in shallow cakes, and permitting the liquid products to "sweat" out and be carried away. Charcoal or siliceous earths are then added, and the wax is filtered and moulded into cakes. The paraffins of high melting-point are harder and less transparent. The cost of developing high melting-point paraffins in the United States is prohibitive and these grades are imported, especially from India.

¶ Paraffin is used for such a varied number of purposes that it is impossible to specify them all. Although it plays an important part in the manufacture of candles—the defects of which are counteracted by the price—great quantities are also used for insulating purposes in electrical work; in the match industry for impregnating match sticks; as a basis for ointments and unguents; for making water-proof fabrics and papers; as a dressing to impart luster and softness to textiles; for covering the mouths of bottles; in the manufacture of lubricants; making leather softening preparations; in polishes; as an anticorrosive; in the saturation plant in sugar making; for cooling baths; as a protective coating against acids and alkalis, etc., etc. Paraffin paper, covering iron, has been found to be a splendid preventive of rust, especially in the case of railroad bridges. In general paraffin can be employed wherever

protection must be afforded against destructive agents.

¶ Ozokerite, which before the war was developing rapidly as a substitute for beeswax, presents the interesting phenomenon of a wax being mined. In 1889 it was found in a meteorite by Meunier. Its exact origin has never been definitely settled and is still the subject of much controversy. Some hold that it is an intermediate product between natural fat and petroleum, whereas more current opinion maintains that it is an oxidation and condensation product of petroleum. In its crude form ozokerite varies considerably. The color ranges from yellow to a dark greenish brown, while the consistency is also subject to deviation, hardness depending upon proximity to the earth's surface. Ozokerite is obtained by under-ground mining as well as by open-cast working, but the quality diminishes in proportion to the depth of borings.

¶ Ozokerite was first discovered in 1736 on the coast of Finland. In 1860 production was commenced on a fairly extensive scale at the Boryslaw mines in Galicia which reached the height of their production in 1883, but which before the war were still the leading source of the world's supply. The upper strata of Boryslaw are exhausted; and workings before the war extended to a depth of 1000 feet. What permanent damage war's devastations have had on ozokerite mining in Galicia cannot be determined until after peace. Ozokerite has been mined to a limited extent in Utah, but as a result of high cost of operation and inferior quality, the American product on the market is very limited. The wax

has been found in Servia, Egypt, Orange Free State, Tcheleken Islands, Roumania, and Argentina, but the industries in these localities is still relatively undeveloped, and output is small. It is reported that rich pockets of ozokerite have recently been discovered in Hungary in the district of Korosmezo; also at Inhambane (Portuguese East Africa) and in Northern Finland.

¶ Before the war Germany was the principal customer for Galician ozokerite, while limited quantities were shipped direct to Russia, France, and the United States. Hamburg, Bremen and other German cities re-exported considerable amounts to this country and to England. The large ozokerite refineries were situated in Hamburg, Drohobycz, and Vienna. Formerly the refining process consisted of distillation with superheated steam, but the more modern method involves the use of sulphuric acid, deacidifying powders, and decolorizing agents. Ceresine is the name of the refined product, but adulteration is common and many of the commercial so-called "ceresines" are not much more than pure paraffin.

¶ Beeswax is the oldest of the waxes, and its use dates back to the earliest times, both for lighting purposes and for making wax figures. It possesses the peculiar property of becoming very plastic when warm and is eminently adapted for all kinds of moulding or casting. To-day its employment covers an almost innumerable list of industries, and the demand is increasing. Electrotyping; candle material; salves, ointments; water-proof compounds; waxed thread;

various inks—these are only a few of the applications of beeswax. It is employed in dentistry for the making of vulcanite dentures.

¶ The production of beeswax, which is secreted by the bee for the purpose of building the honeycomb, is practically world-wide, but modern methods of bee-culture as adopted in the United States, Europe, Australia, and elsewhere are concerned principally with the output of honey and the yield of wax in these parts of the world has suffered in consequence. The same comb, frequently adulterated, is used several times and considerable quantities of wax are withheld from the market by this practice. The selling of honey in the comb has also helped to reduce the total yield. The wax centers of the world have become increasingly dependent for their supply of beeswax upon countries where the wax produced by wild bees is collected for export, although this wax is usually not equal in quality to the European grade.

¶ During the twelve months ending June 30, 1917, the United States imported 2,685,982 lbs. of beeswax of which well over 80 per cent came from the West Indies and South America; Cuba, Domini-

can Republic, Brazil, and Chili were the principal sources. In 1913-14 Europe furnished 548,470 lbs. as against only 170,768 lbs. in 1916-17.

¶ Beeswax varies in color from light yellow to dark greenish brown. The color depends largely upon the care exercised in the melting-out process and some of the foreign grades are greenish, reddish, and brown. Some Cuba wax is even black. Obviously different species of bees yield varying qualities of wax. The bleached product is known as white wax. Refining and bleaching can be accomplished either by melting, by sun bleaching, or by treatment with ozone, potassium permanganate, potassium dichromate, or hydrogen peroxide.

¶ Spermaceti, whose manufacture in this country is carried on by two firms only, is a white wax of crystalline structure obtained as a solid precipitate from the head oil of the sperm and bottlenose whale and also to a lesser degree from shark and dolphin oils. It is refined by remelting, crystallizing and pressing. Commercially, it is used in the manufacture of certain special grades of candles and also for cosmetics and in certain leather preparations.

—The Americas.




EDITORIAL

WM. W. BELCHER, D. D. S., *Editor*

186 ALEXANDER ST., ROCHESTER, N. Y.

Oral Hygiene does not publish Society Announcements, Personals or Book Reviews. This policy is made necessary by the limited size and wide circulation of the magazine.

“He That by the Plow Would Thrive Must Either Hold or Drive.”

T is pleasing to note that the dental profession have done their share in subscribing to the various Liberty Loans and Y. M. C. A. fund; that they have taken an active part in campaign work and performed the office of a good citizen. The temptations to neglect one's practice in the past year have been more than usual with the sale of War Stamps, Liberty Bonds, and funds for Belgian babies. All of these are side lines taking your attention and interest from your work.

¶ It is probable that at least one other loan campaign will be necessary, but after it is over let it be back to business with renewed interest.

The trouble with most of us is that we have too many distractions, and deflections that take one's time from business and from getting ahead. In fact, many practice dentistry as a side line. We gain our sustenance from our profession that we may do other and more pleasing things. This may take the form of politics, church and lodge work, Y. M. C. A., Knights of Columbus, or the successful running of a Sunday School. One can even make an evil of dental society work, which, carried to extreme is just as bad as going crazy over “The Little Nell Copper Company,” or the stock of “The Big Horn Oil Company.”

The dentist has been interested in oral hygiene and the need of dental dispensaries in the schools. Many of us lose our balance in this work and give more time to it than good judgment would justify, to our financial loss. We may belong to The Village Improvement Association, Automobile Club, be Secretary of the Public Library, a booster for the Chamber of Commerce, with the same result.

One may easily make an evil of any worthy philanthropic work, if carried to extreme. All are conducive to an early breakdown, nervous prostration, which may mean liver and kidney trouble, and an unpaid undertaker's bill. To sell War Stamps may be a duty, but you have a duty to your family. You have a duty to your patients, and first of all if you would have the respect of the community, you must be a financial success. This in order to maintain your self-respect, that of your patients, and your confreres. The bank does not give a hurrah for your philanthropic work when your note is not paid, or you have overdrawn your account. Your patients may be pleased to see their doctor's picture in the paper and learn of his achievements, but continued activities along this line convinces them that you are not minding your business and keeping up with your profession. This is confirmed if you are absent during office hours.

The man who attends strictly to his business may view life from a narrow outlook, but he is the one to whom you go when in trouble. The public wants a man who is practicing dentistry and able to deliver it hot from the bat; who is not distracted by outside interests, or exhausted and cranky in his office. ¶ Finally do not forget that you are entitled to one month for rest and recreation. This may be January or July as best pleases you, but the result is the same; increased health and finance for the year.

In Memoriam

"God's finger touched him, and he slept"

SIMEON HAYDEN GUILFORD

A. B., A. M., D. D. S., Phd.

Born: Lebanon, Pa., April 11th 1841

Died: Philadelphia, Pa., Jan. 18th 1919

Aged 77 years

Author, Teacher, Philosopher, Friend

NOTE AND COMMENT

"Oh! how I hate to get up in the morning

Oh! how I'd like to remain in bed;

First I hear the milkman call,

Then the kids begin to bawl

"I want to get up—I want to get up—

I want to get up—it's morning."

Some day I'm going to murder the newsboy

Some day they're going to find him dead,

And then I'll get the worst of all,

The early bird with his telephone call,

And spend the rest of my time in bed."

☞ The drum makes the noise—but it is the silent baton that directs the orchestra ☞ ☞

☞ "One reason a man has more pockets than a woman is because his collar is too tight to permit him to throw things down his shirt front." ☞ ☞

☞ Porcelain money is used in Burmah and Siam; and feather money manufactured from short red feathers from beneath the wings of a species of parrot, is the ordinary currency of the Santa Cruz Islanders. ☞ ☞

☞ Greenfield, Massachusetts, is raising funds for its Dental Clinic Committee by holding Bridge parties at the Mansion House. It is made a social affair and special tables are arranged for. ☞ ☞

☞ A Special Post-War Course given under the auspices of the Preparedness League of American Dentists, was held at Columbia University Dental Infirmary, January 20-25, 1919, inclusive. The fee for the course was \$50. ☞ ☞

☞ The *Denver Post* announces the discovery of the only considerable body of radium-bearing ore in the world at Jintown, a mining town near Boulder, Colorado. Dr. C. C. Schell, government expert, estimates that the deposit contains 90,000,000 tons. ☞ ☞

☞ The *Stars and Stripes*, the American weekly published by the army authorities on the Western Front, has a circulation of 400,000. From now on additional subscriptions will not be accepted as, with the closing of war, it is expected to abandon publication. ☞ ☞

☞ It is said that the population of Great Britain has actually increased since the war. In most of the Allied countries this is true. By redoubling the care and protection of the young children almost as many additional lives have been saved, as adult ones have been lost, on the field of battle. ☞ ☞

☞ The American Optical Company, located at Southbridge, Massachusetts, has in successful operation a Dental Clinic devoted to the Prophylactic needs of the Institution. If it is necessary to do other work than Prophylactic the applicants are sent to their regular dentists. ☞ ☞

¶ Dr. Woods Hutchinson is the author of a book. *The Doctor in War*. It is fairly readable but full of repetitions. The Doctor in his travels on the Western Front evidently never met a case of toothache, a dentist or a dental ambulance. He does not mention the dentist and gives no place to his activities.

¶ In all civilized countries the death rate has steadily decreased. Incredible as it may sound the total death rate, both military and civil, during the last three years is very little higher than what would have been considered an average one in the civilized countries of Europe sixty or seventy years ago.

¶ With the high price of wool it seems to be a case of farmers, who wish to avail themselves of an important source of revenue, getting rid of the farm dog. They have a chance for such revenue, and sheep may furnish a steady income; but indications go to show that it would be a case of getting rid of the dog and keeping the sheep.

¶ William H. Leake, D. D. S., the new Oral Hygiene Inspector of the New York State Department of Education desires to build up the dental section of the medical library, which is a part of the New York State Library. He desires to receive old numbers of dental magazines and contributions of bound and unbound volumes. A word to the wise is sufficient.

¶ Save. There is inspiration, there is joy, there is a thrill of elation, there is consciousness of victory in saving. It raises a man's self respect. It increases his courage. It makes him more of a man, less of a sycophant. It fits him to be a better husband and father. And it should tend to make him a better worker, for his mind will not be harassed by the ever-present gnawing of poverty and the nightmare of coming destitution.

¶ Among the most vital necessities of war have been rubber and cotton. One of the great concerns of the hospital has been to rescue enough rubber for its purposes from the ever devouring motor, and cotton for its dressings from the munition factories where it has been turned into deadly explosives. Rubber, besides playing a part in rubber tires, has been used by the physician for his rubber gloves, irrigation tubes, etc.

¶ Mobile rendering plants under modern war conditions accompany every division, and one large part of the enormous wastage of war will be eliminated when horses are no longer buried. These field rendering plants will send fats and greases to the soap factories. To bury a dead horse means wasting the material of the value of several Liberty Bonds but the new mobile salvage save everything even the horse shoes.

¶ The part played by the trained nurse at home and abroad during our great war cannot be too frequently emphasized. And this is particularly true of the married women who thought they had retired from nursing activities. They have filled prominent places in the work of the Red Cross and the Motor Corps, and have given splendid service everywhere during the epidemic. With the surgeon situated on the European battle fields, they have endured every hardship and faced death in many forms.

¶ We are inclined to think of subscriptions to our Liberty Loans as confined strictly to the United States. This is not true. Many millions were subscribed by our boys on the Western Front and even Mexico, whose quota, assigned at \$1,000,000, was over-subscribed. \$2,250,000 were bought, not only by the citizens of the United States residing there, but by citizens of other allied countries and by a goodly number of Mexican sympathizers.

¶ The core shop, an old British iron foundry, is cited as a revelation in speed in turning out war work. Young girls are producing cores there for hand grenades at the rate of 180 an hour. The cores, the making of which takes 31 movements of the hand, being turned out in 16 seconds. This seems to be a standardization to the nth degree and shows, how once awakened to the necessity of haste, the Englishman, in this case the Englishwoman, is making good.

¶ In most of the wars previous to the present one the first thing an army in the field did was to foul its own water supply. Second, to infect its food by swarms of flies, spreading its garbage dumps and manure heaps. It is only by the correction of these evils that men have been preserved for battle rather than to rot with disease in winter quarters. The armies in Flanders and Northern France, out in open trenches during the winter weather, had less sickness and fewer deaths from pneumonia than in civilian life in time of peace.

¶ Demobilizing our fighting men has been our first thought but we must also demobilize the manufacture of war materials. This includes chemicals, and immense supplies of benzene, toluene, sodium caustic and chlorine, sulfuric acid by tons are all on hand. What shall be done with them and with the manufacturers that produce them? The chemical manufacturers themselves are ready with suggestions of ways in which their products may be turned into peace profits.

¶ Most of the shoes supplied under army contracts are of the hob-nailed variety. One of the jobs up to the Army's new shoe repair shops in France is the furnishing of railroad troops and hospital attendants with hob-nailess shoes. If there are not enough of the russet garrison shoes on hand the hob nails simply have to be extracted and by hand. The railroaders claim that the hob-nails slip as they climb about on the engine and point out the fact that one of their number lost a leg by slipping and failing to catch himself in time. As to the hospital attendants the objection to the studs and heel plates is primarily one of noise, and secondly, one of floors.

¶ The *Journal of the American Medical Association*, Chicago, Illinois, in an editorial December 7, 1918, announces that they will supply the need of an addition of their magazine in Spanish and Portuguese commencing January 1. The new publication will be published twice a month and circulate in all Spanish-speaking countries as well as Brazil and Portugal. This need has been in part anticipated in dentistry by the formation of the Pan American Publishing Company of Pittsburgh, Pennsylvania, which issues a magazine, *The Revista Dental Internacional*, which is modeled very much on the lines of *Oral Hygiene*.

¶ The manner in which British prisoners, confined in German camps, have been neglected and compelled to work in mines and unsanitary surroundings, and neglected by German physicians, is the cause of an indignant protest by the medical profession in England. The counsel of the Royal College of Surgeons decided to omit the Universities of Germany and Austria from the list of schools from which certificates for professional education shall be received. A similar decision seems about to be taken by the Royal College of Physicians.

¶ At Camp Dix, Wrightstown, New Jersey, where influenza has reappeared, which cost more than 800 deaths at the previous visit, precautionary measures are being taken to fight the disease. Among those is the use of the tooth brush. Failure of a soldier to use his tooth brush at least twice a day becomes a misdemeanor under the new regulations, and a teeth-cleaning guard will be assigned to each barracks to see if this order is obeyed. No man with even the slightest symptom of a cold will be allowed to help in any way in the kitchens or mess halls. Coughers and sneezers must wear gauze masks at all times. Telephone mouth pieces will be removed and washed in antiseptics daily, etc.

¶ Fall River, Massachusetts, reports that because of the falling off in attendance of the school children at the Dental Clinic, the authorities are considering closing the Dental Clinic, temporarily at least. In a letter to the Superintendent of Schools, Agent Morris of the Board of Health, called attention to the step contemplated and deplored the fact that the attendance of children had fallen off to such an extent that the closing of the Clinic is being considered. He expressed the belief that instructions should be given teachers to keep in touch with the children on this very important matter.

¶ Miss Anna J. Foley, speaking of the Dental Hygienists' work in the Hyde Park Station, of the District Nursing Association, says:

¶ "The need for dental hygienists in our schools is shown by the results of the dental hygiene work in Hyde Park. Among the 485 children of the first and second school grades whose teeth were cleaned and examined by these hygienists, 95 per cent were found to have dental defects. Dental defects result in headaches, indigestion, bad throats, absence from school and all kinds of disabilities. And unless these dental defects are corrected during childhood there is grave danger of the matter being afterwards neglected."

¶ Grand Rapids, Michigan, reports the doubling of its free dental work in the public and parochial schools.

¶ Dr. H. F. VanDrezer has been engaged as full time dentist by Welfare Director Davidson, and he devotes his mornings at the West Side school building, and is at the East Side each afternoon of the week except Sunday.

¶ The report of the dental clinic for the fiscal year ending March 31, 1918, when only the East Side clinic was in operation, will give some idea of its work. During that year 654 amalgam fillings, 254 cement fillings and 248 root and canal fillings were inserted. There was a total of 1590 treatments and of the 301 extractions, 193 were deciduous and 108 permanent. 951 children were treated and 238 were discharged. The applications of 577 children were received and 333 were admitted. The actual attendance was 1843, one attendance being recorded for each visit of the patient, and this attendance was divided as follows: Parochial 841; public school, 1002.

¶ Now that the war has come to a close we can look for an immediate reduction in the price of drugs. Export restrictions have been removed and many holders are liquidating their stocks. At the time of writing Mercury has been reduced \$4.00 a flask of 75 pounds and Saccharine has been lowered \$2.00 a pound because of increased supplies. This is only an indication of what is apt to occur all along the line and the Dentist is advised to buy in small quantities until the market returns to normal.

¶ No one food is so acceptable, especially to the American soldier, as that indispensable staple, bacon. Perhaps it is even more valuable than beef because it is twice as nutritious in proportion to its bulk, will keep in any climate, can be cooked in any old way and yet be good. It may be dropped in the river, run over by an ammunition wagon, rolled on by a mule, left out in the rain all night or in the sun all day, and yet it is a perfectly acceptable food when cleaned, trimmed and fried. It contains that indispensable element, fat, which can be used for frying, or as shortening in bread and biscuits. You do not tire of it, and it forms an acceptable ration the year round.

¶ We learn from the *Herald* Rutland, Vermont that Vermont is the only state in the country which has a rural dental clinic. This clinic is operated entirely by private donations and is under the direction of the state board of health, state board of education, and the Vermont State Dental Association. Dr. S. Dewey Darling, the dentist employed, selects places which are the most remotely situated from dental offices. He makes the statement that an average of seven or eight fillings and between two and three extractions of teeth are found to be needed among school children between 6 and 12 years throughout the state.

¶ The rural dental clinic has just completed a year of existence and during that time about 1000 school children have had their teeth put right, free of charge. During the last 12 months about 7000 fillings have been put in and 2300 teeth extracted.

¶ Dr. Darling has just completed his work in Glover. The conditions there are typical of every town in the state. One hundred per cent of the children needed something done. The average of extractions per person was 2 3-10 while the fillings were about seven to each child.

¶ One of those individuals who have leisure enough to dig into the records of days long past has unearthed what is said to be the first advertisement ever published of a preparation for cleaning and preserving the teeth. It appeared 258 years ago, and, though the language is a bit involved, the writer needed no lessons from modern publicity experts in claiming virtues for his product. The "ad" was printed in the "*Mercurius Politicus*" of Leith, Scotland, in 1660, and reads, says the *New York World*:

¶ "Most Excellent and Approved Dentifrices to scour and cleanse the Teeth, making them white as Ivory, preserves from Toothache; so that being constantly used, the parties using it are never troubled with the Toothache; it fastens the Teeth, sweetens the Breath, and preserves the Mouth and Gums from Cankers and Imposthumes. Made by Robert Turner, Gentleman; and the right are only to be had at Thomas Rooker, Stationer, at the Holy Lamb at the East end of St. Paul's Church, near the School, in sealed papers, at 12d the paper. The reader is desired to beware of counterfeits."

¶ The position that American chewing gum has assumed in modern warfare, especially among the American soldiers, is absolutely unique. The doughboys cannot get enough of these supplies. With it they are able to withstand fatigue, long marches and absence of water. It also serves to clean the teeth and is a good substitute for tooth paste. The importance of the chewing gum and the cigarette is one of the surprises of our war on the West Front. Even the Y. M. C. A., which does not approve of cigarette smoking, had to bow its head and meet the demand, aye, and even supply packs of playing cards. A year ago if you had told a Y. M. C. A. official that the Organization would sell cigarettes, chewing gum and playing cards, what would his answer have been?

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¶ The many strange conditions under which the Red Cross has been subject is illustrated in a letter from Dr. W. Dodd working at Mejdal near Jerusalem, Palestine. He reports to headquarters at Washington, D. C., on the conditions of the hospital at which he is stationed. The hospital was made up of about twenty-five tents with a dispensary tent, living quarters for the staff, etc. It is located in the sandy district with thistles and scant grass and it was the custom of every one, including the staff, to go barefoot. The patients brought here were from 60 to 100 a day. Out of 252 operations performed by Doctor Dodd in less than seven weeks, 222 were for eye troubles, of which trachoma cases formed the great majority. Doctor Dodd treated a number of patients with bombed hands, of which there were many in the earlier days. The cases he treated were mostly in children who picked up unexploded Turkish bombs which had been laying in the fields from the time of the British advance. Many fingers and hands were lost from this cause. Lice, flies, and other vermin were everywhere, and maggots were frequently found in wounds, as, a favorite dressing of the native, a piece of raw meat, is a good breeding place. They were found in the ears and scalp, and in other wounds. Difficulty was experienced in making the patients conform to the sanitary requirements, and penalties had to be imposed for violations.

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¶ The following from the *National Geographic Magazine* is an interesting item. Before the war had even approached its climax, Britain discovered that it faced a shortage, among other things, of milk. The Government guaranteed very high prices to induce production; but the sacrifice of herds, plowing up of grass lands, and deficiency of labor rendered stimulative efforts futile. There was not enough milk to go round in the old, easy way, and, administration stepped in to insure, first against profiteering, and second that those who most needed it should have their share of the milk. Observe the results.

¶ Some months ago the British Medical Association discussed some remarkable and vital statistics. It found that for the last preceding year the death rate among infants under five years old had been about one-half the rate in pre-war times. It was a phenomenon beyond the comprehension of anything but common sense. The medical authorities applied that test and issued their verdict. For the first time in modern history of Britain there had been milk enough for all the babies, and good milk. But if the adult patron of a public eating-house buys and drinks a glass of milk as a beverage, he is liable to a fine of five pounds, and the proprietor subjects himself to a like penalty. If anybody imagines that hereafter Britain will return to the customs of the "good old days," when for want of milk twice as many British babies enjoyed the privilege of dying, he is far from understanding what is going on in the English public mind today.

¶ Less than two centuries ago tea and coffee were introduced as part of our dietetics. They were looked upon with great suspicion at first; denounced by the Puritan because they were pleasant, and by the doctor because not in the pharmacopoeia. The third new article of food, sugar, which came in about the same time and still goes down with them, have added to the comforts of civilized men. It would be impossible to match them with anything of equal value. Previous to the introduction of sugar the principal sweetening of the world was honey, and sugar was first known as vegetable honey.

¶ This war is to have definite and somewhat unexpected results. We are shocked by the fact that 8 per cent of the men called to the colors are unable to read or write and yet such facts have been in our statistics. Fifty per cent of our school children are handicapped in some degree by a remedial defect that interferes with their obtaining an education. We are told that since the war there has resulted a shortage of teachers which has closed 12,000 schools in the country affecting every state in the Union. There is a shortage of 50,000 teachers, says this statement, and 100,000 persons are teaching who never before had any former experience. The cause, of course, is the beggarly pay allowed school teachers. If we show our appreciation to the teaching forces and grant a living wage it would be worth while, and we will have the full appreciation and understanding of the slogan of the New York Medical Bureau: "Health is purchasable by any community and that it can, in a degree, determine its own death rate," will be universally recognized

¶ The Red Cross in France is having very appreciative audiences in every line of health work. The modern French boy or girl evidently has not been spoiled by too much instruction in regard to his teeth. You merely give a gay red, white, and blue pamphlet entitled "Why You Should Brush Your Teeth," to a little French boy with a toothache and he will "suddenly grow better." If you doubt it, read this letter:

Dear Benefactor—In the name of my classmates I thank you from the bottom of my heart for all the good as well as the pleasure you have given us.

¶ Our teacher has given us the pretty and very interesting pamphlets which you were good enough to send us. They gave us a great deal of pleasure. Little Georges, a lovely little boy of five, who does not know how to read yet, cried for a pretty book of his own; as he has had a toothache for some time—he is cutting his teeth—mademoiselle gave him a pamphlet which exactly suited his case, and he suddenly grew better.

¶ We will keep all those pretty pamphlets carefully so that we may reread them frequently, now and later. Our teacher is going to make them the subject of a reading lesson and a talk every week, which will be very amusing, as they have such attractive pictures.

¶ We shall try to show ourselves worthy of so much kindness by putting into practice, little by little, the good advice in the rules of hygiene, which have been posted for some time on the walls of our little school, for we want "to live long and in good health." We very much regret that we cannot kiss our good little comrades in great and noble America, for a very long time we have loved them like brothers. Every day we shall strive to love our dear benefactors better and that will be an easy and pleasant duty for us.

Jeanne C.

Twelve years old.

¶ According to the statement of the Surgeon-General of the War Department venereal disease constituted the greatest cause of disability in the army. For this condition civilian communities have been responsible. Three per cent of a million draftees whose examination blanks first reached the Adjutant-General's office in Washington had a venereal disease when they reported at Camp.

¶ It is interesting to note that the Western states lead off in the smallest percentage, that of Oregon .59, Idaho .76, Utah .79, Washington .86, Montana .89, South Dakota .95. The Southern states are the greatest offenders. With the exception of Ohio 3.24 per cent, Indiana 3.33 per cent, the Southern states have a standing of 3 per cent and better. That of Florida at the foot of the list 8.9 per cent.

¶ The following from the *Boston Daily Post*, issue of December 3, 1918, while conveying no new facts to dental conditions is a well expressed resume of the subject, and well worthy of close attention by parents, teachers and nurses.

¶ Decaying teeth are a certain aid to disease and a serious obstacle in combating infant mortality, according to George H. Wright, D. M. D., in a report on "Child Conservation from a Dentist's Viewpoint."

¶ "A neglected mouth and decaying teeth are a prolific source of filth," declares Dr. Wright. "Decomposing food within the mouth is in constant contact with the crypts of the tonsils, and becomes the best culture media for bacterial propagation."

¶ "Neglected teeth and unhygienic mouth soon lead to imperfect use of the teeth in the mastication of food. With the nerve or pulp of the teeth exposed the child quickly bolts its food. This irrespective of the amount or quality of food ingested soon leads to faulty digestion and acidosis, which is easily demonstrated by simple tests within the mouth as well as by the visible destructive action upon the enamel of the teeth.

¶ "Lack of use of the teeth and muscles of mastication soon impairs the whole facial structure, which in a young child is in process of development within and without. The materials necessary for growth of bone and other tissue are dependent upon a good blood supply. This supply is inhibited through lack of use.

¶ "When the teeth have failed to contact normally and the dental arch becomes deformed we can be sure that the structures immediately adjacent suffer in direct proportion to the extent of the dental irregularity. This means one or more of the results will be poor health and poor growth.

¶ With even so concise a summary of some of the evils attendant upon the lack of care of the mouth and teeth during childhood we readily appreciate how great and vital is our responsibility to the children. We are in duty bound to provide some means for their protection against the ignorance and the lack of interest on the part of the parents.

¶ "What is the use of treating hundreds of children in our hospital-clinics who suffer as a result of lack of care in oral hygiene when a little provision through education and training at an early age would prevent so much?"

¶ "A remedy will be found in a closer co-operation between the departments of health and school nurses and dentists within every community, and the employment of trained dental hygienists where there are great numbers of children to be cared for. Our statistics from such sources would soon show a marked decrease in numerous ailments of childhood and better conservation of our future men and women.

FUNNIES

We want good, clean humor for this page and are willing to pay for it. Send me the story that appeals to you as "funny," and if I can use it you will receive a check on publication.
Address: EDITOR, 186 Alexander Street, Rochester, N. Y.

☞ Johnny was feeling real adventurous and was climbing on the roof of his home, when all of a sudden he began to slip and slide rapidly down the roof. He was frightened and cried—"Oh Lord save me!—Never mind, I caught on a nail."

☞ A young girl from a country town went to a city boarding-school, much against the wishes of her father, who thought she would be spoiled by city ways.

☞ Soon she wrote in one of her letters: "I am in love with Ping-Pong." The mother read the letter aloud to her father, who turned angrily upon her, saying: "Well, you see I was right. I knew no good would come of her going to the city. Now you see she has got in with one of those danged Chinamen."

D. M. M., Santa Cruz, Cal.

☞ George had not been overkind to his wife when he left for camp. And the prospects for his wife when he returned were not any brighter when she got this note from him:

☞ "Them white folks here put some sirup in my arms from the blood of a mad bull and a game chicken that will make a nigger fight a cannon, and I is already feeling like fighting. When I comes home wid that fighting blood in me, if I finds out you ain't been doing right, watch out for George, and I knows how big you are."

☞ The wife took the note to the judge of the county in which she lived

☞ "Well, Eliza," said the judge to the colored wife, after he read the letter, "what can I do for you about this?"

☞ "Judge," replied Eliza, "Ise wan' a divorce or sum of dat sirup."

☞ "Have you amused the baby and kept him quiet while I was gone?"

☞ "Yes ma, and he has n't opened his mouth since you went away."

☞ "What did you do to amuse him Willie?"

☞ "I gave him the mucilage bottle to suck!" D. D. Pueblo, Colo.

☞ Pvt. Lewis made down his bed in the corner of a building that was just in the edge of what would have been No Man's Land had the armistice not intervened.

☞ "I sure did n't think I'd ever sleep here," he said to a comrade.

☞ "Why, I was popping away at a sniper from that hole there in the corner just a couple of days ago. Gee, but it seems queer!"

☞ "And what was the sniper doing to you?" some one inquired from the other corner.

☞ "Well," said Lewis, "he was sure raisin' hell with my life insurance."

☞ A New England farmer had a passion for moving. His minister was passing the farm when John was preparing to move for the fourth time in a year.

☞ "What, moving again, John?" asked the parson.

☞ "Yes sir," replied John.

☞ "You are taking your poultry, too, I see. Are n't they getting tired of being moved about?"

☞ "Getting tired! No, sir; they like it, sir. Every time them hens see a furniture van arrive they run into the yard and lie on their backs, with their legs in the air, waiting to have them tied."